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ABSTRACT

This study describes two surveys of the users of the Public Documents and Maps Department of the Duke University Library. The information gathered in the course of this inquiry is reported: (1) in a profile of the users of the department's reference service, and (2) in a comparison and analysis of the evaluations of reference encounters by both users and librarians. The results of the first survey, the user profile, reveal that most users of the documents department are Duke University students seeking information in the area of the social sciences. The types of questions most frequently asked are requests for legislative information, a specific title or article, and statistical information. Results of the second survey, which focused on the effectiveness of the department's reference service, indicate that: (1) many users may have an inadequate knowledge of government documents, (2) users tend to express high rates of satisfaction with the outcomes of reference encounters, and (3) users seem to respond favorably to instruction by librarians in the use of the department's reference tools and sources. The questionnaires used for both surveys, notes, and a bibliography are appended. (THC)

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THE MEASUREMENT AND EVALUATION OF REFERENCE SERVICE AT THE PUBLIC DOCUMENTS AND MAPS DEPARTMENT OF THE DUKE UNIVERSITY LIBRARY

by

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A master's paper submitted to the faculty of the School of Library Science of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master in Science in Library Science

Chapel Hill

July, 1984

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The results of the first survey, the user profile, reveal that most users of the Documents Department are Duke students seeking information in the area of the social sciences. The most frequently asked types of questions are 1) legislative information, 2) request for a specific title or article, and 3) statistical information.

The results of the second survey indicate that 1) many users may have an inadequate knowledge of government documents, 2) users tend to express high rates of satisfaction with the outcomes of reference encounters, and 3) users seem to respond favorably to instruction by librarians in the use of the Department's reference tools and sources.

Headings:

Reference services -- Evaluation

Surveys--Government publications

College and university libraries--reference services

Government publications

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INTRODUCTION

Bernard Fry, in a 1978 report for the National Commission on Libraries and Information Science, notes that government documents are probably used less than any other kind of publication in libraries, and that government documents departments often lack the necessary resources and staff to utilize their collections effectively. In light of these problems he writes:

> It is significant that several major academic and research libraries, as at the University of California, Berkley, have recently made a comprehensive re-examination of policies, procedures, collections, and services affecting their government documents departments. This kind of study is long overdue at many libraries....[1]

Other authorities on government publications have also emphasized the need to study the services of documents departments. In a recent study of reference service provided by selected documents departments in academic libraries, Hernon and McClure point out:

> The first step in improving a service, such as the reference process in academic depository libraries, is to investigate, describe, and understand the current situation and existing factors related to the effectiveness of that service.[2]

In view of the attention focused on studying the problems of documents departments in academic libraries during recent years, the author of this study decided to examine the reference service of the Public Documents and Maps Department of Perkins Library at Duke University. Like the documents departments referred to by Fry and like some of those studied by Hernon and McClure, the Duke Public Documents and Maps Department contains a large collection (about 600,000 items) of U. S. Government documents and serves a major academic community (about 9,000 students and 1,400

faculty) as well as the general public.

However the Public Documents and Maps Department (hereinafter referred to as the Documents Department) currently lacks sufficient information about its reference service to perform the kind of evaluation called for by the writers cited above. While the staff of the Department keeps simple counts of the numbers of reference and directional questions, they need more data about the department's reference service in order to evaluate and improve it.

For example, data are needed about the users of the reference service: such as who they are, what kind of information they are seeking and how they are referred to the Documents Department. Information is also needed about the reference process: for example, the extent to which the users and librarians are satisfied with the results of reference encounters.

Therefore, the purpose of this study is to collect information from both users and staff members of the Documents Department as a first step in the evaluation of the Department's reference service. The information gathered in the course of this inquiry consists of a profile of the users of the Department's reference service and a comparison and analysis of the evaluations of users and librarians about a series of reference encounters.

This study is significant because, while many other such studies have been reported for regular reference departments, there have been few reported studies of reference service in government documents departments.

The first chapter of this study examines the many approaches to measuring and evaluating reference service. This section discusses some of the major studies in each category and points out their comparative advantages and disadvantages. It also reviews related studies in the area of government documents.

Chapter II outlines the design of the two surveys used in this study. The results of these surveys are presented in the third chapter. The final chapter presents conclusions and recommendations based on the results of this study.

CHAPTER I

METHODS OF MEASURING AND EVALUATING REFERENCE SERVICE

Twenty years ago Samuel Rothstein reviewed the literature on the evaluation of reference service and concluded: "The measurement and evaluation of reference service has been more often discussed than attempted."[3]

Ten years after Rothstein's article, Terry Weech also reviewed the literature on this subject and found that library researchers, perhaps spurred in part by Rothstein's article, were making more efforts to actually carry out evaluations.[4]

Today librarians continue to show a strong interest in this topic, and there have been many important studies reported in the literature over the past decade. However, despite such strong interest in this topic, there is no single, universally accepted methodology for the evaluation of reference service. A review of the literature on evaluation reveals many different styles.

Thus, for the sake of clarity, this section categorizes and briefly discusses various methods of evaluation as follows:[5]

- Enumeration and Classification of Reference Questions
- Evaluation of Reference Collections
- Evaluation of Reference Personnel
- Cost Analysis
- Comparison to Reference Service Standards
- Administration of Test Questions
- Unobtrusive Testing

Before discussing the above methods, it would be useful to clarify the meaning of two terms--measurement and evaluation.

Measurement vs. Evaluation

Rothstein made a distinction between what he considered true evaluation and mere measurement. "Measurement," as defined by Rothstein, is "description in quantitative terms;" whereas "evaluation" is "the rating or assessment of worth."[6] In addition, Rothstein noted: "Evaluation presupposes measurement against a specific standard or yardstick or goal...."[7]

While the above distinction seems valid, other researchers do not adhere to such a strict definition of evaluation. Thus this study will use a broad definition of evaluation. In general, evaluation of reference service means any attempt to assess its effectiveness, whether or not there is comparison to a specific standard. Also, measurement may be viewed as an integral part of evaluation of reference service, since the first and other steps of the evaluation process usually involve description in quantitative terms.

Enumeration and Classification of Reference Questions

The simple counting of reference questions is the most common measure of activitiy at the reference desk. By itself such a count gives no indication of the effectiveness of reference service.

The classification of reference questions by type (e.g., ready-reference or in-depth search), by subject, by type of user or other categories goes a step beyond a gross count, and it is more meaningful. The importance of knowing who the users are and what questions they ask seems obvious: for example, such classifications can be used to aid in

planning the reference collection, to guide staff training and to compare one reference department to another.

While there are no current and reliable estimates of how many libraries count and classify reference questions, a 1977 study by Marcella Cuicki reported on the most common kinds of information gathered about reference service. Cuicki wrote that an informal American Library Association survey revealed that the most frequently collected categories of statistical data on reference were as follows:

1) Type of reference question (e.g., ready reference or in-depth search).

2) Form of request (in person, by telephone or letter).

3) Directional questions.

4) Time of day when questions were asked.

5) Type of source used (e.g., reference book or index).

6) Type of user (e.g., student or faculty member).

Other categories included the length of time to answer, subject area of questions and referral of questions to other librarians and agencies.[8]

While collecting such information may seem straightforward at first glance, there are problems relating to the reliability and validity of the counting and classification of questions. For examnple, staff inattentiveness in recording transactions may lead to unreliable totals of questions. Also, staff members may misunderstand their library's question classification scheme, thus leading to invalid results. Nevertheless, if carried out carefully, this method can give librarians and administrators meaningful feedback about what goes on at the reference desk.

Evaluation of Reference Collections

This category of evaluation usually involves the comparison of a library's reference collection to standard book lists and bibliographies.

Weech cites two studies which used more innovative techniques than comparison to standard lists. A study by Houser analyzed the currentness of a reference collection by counting the distribution of copyright dates of the materials.[9] Another study, conducted by the New York State Education Department, sought user opinion on the usefulness of the reference collections in a sample of public libraries.[10]

Evaluation of Reference Personnel

This type of study may involve any of several different approaches. Some studies focus on the number of reference employees relative to the total staff, or on the proportion of total staff time spent at the reference desk. For example, a 1972 study of the Columbia University library system by Mount and Fasana, reported that 11 percent of total staff time involved reference work.[11]

Other researchers focus more directly on reference personnel by observing them during the reference process. For example, Bunge observed selected members of the reference staff in nine public libraries and compared the performance of professionals and nonprofessionals. He found that the professional and nonprofessional staff members answered questions with about the same degree of accuracy, but that the professionals answered questions more quickly and efficiently.[12]

A 1976 study by Benita Howell and others analyzed group differences between the evaluations of users and librarians about a series of reference encounters. Among the Howell study findings were:

1) There was a high degree of user satisfaction with the librarians' performance. Eighty-four percent of users said the librarians had pinpointed their information needs "very well," and eighty-seven percent felt that the librarian had supplied "about the right amount of information."

2) There was a statistically significant difference, however, between the users' ratings of the librarians and the librarians' ratings of themselves: in general, librarians rated their own performance lower that the users did.

> [The authors of this study concluded:]
> This finding suggests two things: (1) that patrons' expectations for service are considerably more modest than librarians' performance standards, and/or (2) that patrons have difficulty distinguishing between their pleasure at being helped and their satisfaction with the quality of help being received.[13]

Another significant study in this category was reported by Mary Jo Lynch in a 1978 article in The Library Quarterly.[14] She observed and recorded the actions and words of reference librarians during over 300 reference interviews in four New Jersey public libraries. According to Lynch, "[t]he primary objective of the investigation was to give form and structure to the phenomenon known as the reference interview...."[15]

The results of her study belied several commonly held beliefs about the reference interview. Among her conclusions were the following:

1) Not all reference transactions involve a reference interview (only about half of the transactions in the Lynch study involved an interview).

2) "Closed" or specific questions, rather than "open" or non-specific questions may be a more appropriate strategy for the reference librarian to follow in the reference interview. Although it is commonly assumed that open questions are better than closed questions, Lynch found

that ninety percent of the librarians' questions in her study were closed. She speculates that the typical environment at a reference desk is not suitable "...for the self-revealing, time-consuming process of responding to open questions."[16]

3) The reference interview is not similar to interviews conducted by other professionals such as doctors or lawyers. This conclusion is based on Lynch's finding that the typical reference interview involved the asking of only one or two "primary" questions (i.e., "...questions through which the librarian introduces some aspect of the patron's search for information and asks for content which is new to the interview."[17]); whereas a typical medical interview may involve up to 40 primary questions.

4) Contrary to the common assumption that library users do not ask for what they actually want, Lynch found that "...in many cases patrons do ask for what they want although not in as much detail as is necessary for the librarian to be able to help."[18]

In sum, Lynch's study provides a useful framework for further analysis of librarians' behavior during the reference interview.

Cost Analysis

Several investigations have sought to calculate the average cost of individual reference encounters. For example, a study by Palmour and Gray of seven Illinois public libraries computed the direct labor costs for answering different types of reference questions (e.g., simple fact or bibliographic citation).[19] This study and other similar ones, however, ignore overhead costs such as library materials. Moreover, most library cost studies do not attempt to compare costs to the benefits received by the users (which would be difficult to assess objectively).

Thus the usefulness of cost analysis as a method of evaluation is questionable.

Comparison to Reference Service Standards

In 1976 the Reference and Adult Services Division of the American Library Association issued "A Commitment to Information Services: Developmental Guidelines."[20] While this brief document is helpful as a general guide to what services and functions are to be included in a reference department, it contains no specific quantitative standards which could be used as a basis for evaluation.

In contrast, a set of standards that does contain quantitative guidelines is the "Standards for Reference Service in Public Libraries," written in 1970 by the Library Association of Great Britain.[21] It recommends minimum standards for the size and subject composition of the reference collection, the types of services to be offered, physical facilities, and the qualifications of reference personnel. For example, the standards recommend providing one seat for every 500 members of the library's population and 25 square feet of floor space for each seat. They also recommend a reference collection of at least 200 volumes per 1000 population and a ratio of staff to population of 1:20,000.[22]

While such standards are not directly applicable to all libraries in the United States, they do suggest that it is feasible for groups of similar libraries, for example the Association of Research Libraries, to come up with quantitative reference standards based on their own criteria and needs. Such quantitative standards would be more useful than the current ALA guidelines, which are too general.

Administration of Test Questions

This method attempts to evaluate the accuracy of the responses of

reference personnel to questions requiring an objective answer. The method usually involves the preparation of a list of test or sample questions which are "...selected to provide a range of difficulty and require a variety of sources."[23] Test questions were first used in an extensive way by the New York Committee on Public Library Service in a 1957 study of a sample of public libraries.

However, these and other such studies during the 1960's suffered from an obvious weakness: the test subjects knew they were being observed and evaluated. Under such conditions, according to the well known "Hawthorne effect," a librarian's behavior is apt to change. He or she may search more carefully for an answer and so perform better than under normal conditions; conversely, the librarian may feel pressured by the test conditions and his or her performance may deteriorate.[24]

As Lancaster notes, the solution to this problem lies in the use of unobtrusive testing:

> Ideally, it would be preferable to administer a controlled test with the subject unaware that he is being studied. Such a test is likely to be more satisfactory in many ways than an obtrusive test, because it could measure the performance of the reference librarian under actual working conditions rather than under the artificial conditions of an obtrusive study.[25]

Unobtrusive Testing

While there are also problems associated with unobtrusive testing, this method has been used successfully in several major studies over the last 15 years, including one concerned with reference service for government documents. Today unobtrusive testing is the major trend in the evaluation of reference service. Because of its importance, this section will briefly review the major studies which have used this method and the method's advantages and disadvantages.

Procedures Used in Unobtrusive Testing

All of the authors of the major studies followed approximately the same procedures in carrying out their research:

1) They selected test questions of a factual or ready-reference nature.

2) The researchers pre-tested the questions and discussed them with other librarians to ensure that the questions were typical for a given library.

3) A random sample was selected from a population of libraries, e.g., public libraries in New Jersey or academic libraries in the southwestern United States.

4) The authors trained proxies, usually students, to administer the questions in person or by phone to the reference staff of the libraries.

5) The authors evaluated the accuracy of the answers and analyzed the results in relation to several variables, e.g., the size of a library's collection, the type of institutions or the difficulty of the question.

The Crowley and Childers Studies

The first two major studies to use unobtrusive testing were those completed by Terence Crowley in 1968 and by Thomas Childers in 1971. The studies were published together in Information Service in Public Libraries.[26]

Crowley's study investigated whether libraries with high per capita expenditures would perform better than those with low per capita expenditures. While he found no statistically significant difference between the two categories, his other findings were enlightening. For example, the composite percentage of questions answered correctly by all

libraries was only 54 percent. In addition, many libraries performed most poorly in locating answers to questions requiring current information.

Childers' study and results were quite similar to Crowley's, with the exception that all questions were administered by phone. Childers also found no significant relationship between correct responses and per capita expenditures: the overall percentage of correct responses was 55 percent.

The main value of the Crowley and Childers studies was that they demonstrated the value and feasibility of unobtrusive testing, and they stimulated the interest of other researchers in this technique.

The Suffolk County Test

In 1977 Childers was invited by the Suffolk (N.Y.) County Cooperative Library System to perform a large study using unobtrusive testing of 57 of the system's libraries. This study was important because it was done at the invitation of a library system which sought to use unobtrusive testing as a means of improving its reference service. Childers also performed extensive testing of outside agencies (e.g., a government agency or another library) to which the proxies were referred when the original library could not answer the question.

Again the overall percentage of correct answers was only about 50 percent. In addition, Childers found that when a reference staff member failed to provide an answer, he or she referred the proxies to other agencies only about half the time; however, when the proxies followed up on those referrals, they received a correct response for 67 percent of those questions.[27] Childers concluded that the libraries in this study needed to improve their policies on referral of difficult questions, and that reference librarians in general need to expand their use of sources beyond the printed sources of the

traditional in-house reference collection.

Unobtrusive Testing in Academic Libraries

Other library researchers soon applied the technique of unobtrusive testing to reference departments in academic libraries. Two studies of telephone reference service, one by Marcia J. Myers and one by Jassim M. Jirjees were published in 1983.[28] Myers tested a sample of 40 colleges in the southeastern United States and Jirjees used a small sample of 5 colleges in the northeast.

The overall results for both studies were remarkably similar to the results of the public library tests. Myers' libraries answered about 50 percent of the questions correctly and Jirjees' libraries about 57 percent.

Both authors also sent questionnaires to the libraries in their respective samples. One important finding in both studies was that few of the reference departments had concrete written policies for reference service. This fact may account for some of the inconsistency the authors encountered in response to the test questions (e.g., the reference staff at some libraries gave out conflicting information concerning the library's policy towards telephone reference service).

The Hernon-McClure Study

Another unobtrusive test of reference service in academic libraries focused exclusively on reference service for government documents. This study, entitled Improving the Quality of Reference Service for Government Publications by Peter Hernon and Charles McClure, tested documents departments of academic libraries in the southwest and northeast.

The overall percentage of correct responses was 37 percent (49 percent in the northeast and 20 percent in the southwest). After analyzing several

institutional variables (such as size and budget of the library and organization of the documents collection), the authors found no single variable that had a strong correlation with the percentage of correct answers at a given library.[29]

Based on these findings and their observations of reference staff during the tests, Hernon and McClure conclude that the competency and attitude of "...the individual library staff member is the single most important factor affecting the quality of reference service for government documents."[30] Furthermore, they recommend that: "Concentrating on the skills and competencies of individual library staff members may well upgrade the quality of reference service...."[31] The authors' recommendations will be discussed further in relation to the Public Documents and Maps Department at Duke in the conclusion of this study.

The Pros and Cons of Obtrusive Testing

While more study is needed, the results of the studies described above suggest a few important points about the provision of reference service in both public and academic libraries. Most importantly, a user has only about a 50 percent chance of finding the correct answer to a factual question at the reference desk of both public and academic libraries. This percentage is probably significantly lower than what the typical reference librarian would imagine his or her own performance level to be. Thus as Lancaster writes, those studies should serve as a warning flag to members of the profession to examine and evaluate further the reference process:

> The greatest value of these types of analyses...lies in their diagnostic possibilities. Evaluation procedures need to be applied intensively to individual libraries, or to the libraries in a particular system, to identify weaknesses and sources of

> failure and to lead to corrective actions designed to improve future performance. Such corrective actions could take the form of improving procedures for selection and training of staff, improving the reference collections in specific areas...or changing practices in the reference division (e.g., establishing new files, routine clipping of newspapers, assigning responsiblity for keeping various reference tools current).[32]

However, there should not be an overraction to the results of the unobtrusive tests. For these studies test only one aspect of reference service--the response to factual questions. Other areas of reference service, such as individual guidance for in-depth subject searches and bibliographic instruction are equally important. Furthermore, considering that most users would probably have a much lower chance of finding the correct answers themselves, perhaps a 50 percent correct ratio is not unexpected. In sum, unobtrusive testing has proved to be an effective method of evaluating reference service, and it probably will become a routine technique in many future programs of evaluation.

Other Research on Government Documents

Thus far the only study to specifically address the problem of measuring and evaluating reference service for government documents is the Hernon-McClure study. These authors also provide a useful review of other recent research on government documents. While such a review is beyond the scope of this paper and seems unnecessary to repeat, it would be appropriate to mention a couple of areas of research on government documents which are related to reference service.

There have been a few important use studies of government documents. For example, Hernon surveyed usage of government documents by faculty members in the social sciences at a group of colleges, and found "...a wide range of use and non-use;" and he noted that "...a small portion of the government publication collection accounts for the vast majority of use."[33]

A recent study of government documents use at Miami University

of Ohio reported similar findings: "Documents in a few areas of the collection account for a large percentage of use."[34] The study also revealed that only about three percent of the print collection and one half of one percent of the microfiche collection was used during the year. The authors conclude that there is a need for a more selective collection development policy as well as a need to improve user education and outreach activities.

According to Hernon and McClure, other research related to reference service for documents has shown that: 1) government periodicals are rarely represented in traditional periodical indexes; 2) government documents are often not well integrated into overall library administrative, reference, and collection development processes and; 3) documents libraries have been unable to keep pace with new technologies used in other reference work, e.g., online database searching and in-house automated systems.[35]

Summary

Recent years have seen an increase in interest and activity among library researchers related to the measurement and evaluation of reference service. While researchers have used many methods and approaches, unobstrusive testing, despite its limitations has emerged as the most significant method of evaluation. As in the Hernon and McClure study, it has proved to be a valuable tool in highlighting weaknesses in reference service. While other research on reference service for government documents is limited, studies tend to show an under-utilization of government documents and a lack of integration of documents into the mainstream of service.

CHAPTER II

SURVEYS OF THE USERS OF THE PUBLIC DOCUMENTS AND MAPS DEPARTMENT

Chapter I has provided an overview of the methods of measuring and evaluating reference service. This chapter focuses on the provision of reference service at the Public Documents and Maps Department of Perkins Library at Duke University (hereinafter referred to as the Documents Department).

This study used a two-stage survey procedure for the purpose of gathering information about the Documents Department. The first survey profiles the characteristics of the Department's users, while the second survey attempts to assess the effectiveness of the Department's reference service.

Research Questions and Hypotheses

Because the aim of the first survey was to generate baseline data about the users of this service, formal hypotheses were neither developed nor tested; instead the following research questions guided this phase of the study:

1) Who are the primary users of the Documents Department; in what subject areas are they seeking information; and what type of questions do they ask?

2) What proportion of the patrons are using the Department for the first time?

3) What proportion of the users are referred to the Department and by whom are they referred?

4) How much time do patrons spend in the Department on a single visit?

5) Are there any differences in the information-seeking patterns of major groups of users, i.e., undergraduate students and graduate students/faculty?

As will be seen in the following chapter, the analysis of the data generated in this phase of the study supports a major assumption of the study, i.e., that the users of the Documents Department have in common certain characteristics and information-seeking patterns. For example, a large majority of the users are seeking information in the subject area of the social sciences.

The second survey focuses on a series of reference encounters between users and librarians. The goal of this phase of the study was to attempt to assess the effectiveness of the Department's reference service by comparing the users' and librarians' evaluations of major aspects of the reference encounter.

Howell notes the significance of examining both users' and librarians' viewpoints:

> Since the reference encounter is an interplay between the patron and the librarian...it seem[s] essential to investigate the librarian's feelngs about each encounter as well as the patron's feelings about it.[36]

In addition, since user surveys generally show high levels of patron satisfaction with librarians' performance,[37] the librarians' evaluations serve as a standard of comparison for users' evaluations.

The general hypothesis for the second survey was that there would be statistically significant differences between users and librarians in their evaluations of the reference encounter. Using this hypothesis as a guide, the following specific hypotheses are stated in the null form.

H_1 There is no statistically significant difference between ratings by users and librarians of the user's knowledge of government documents.

H_2 There is no statistically significant difference between evaluations by users and librarians of the librarian's ability to pinpoint the user's information needs.

H_3 There is no statistically significant difference between evaluations by users and librarians of the ability of the librarian to supply the right amount of information to the user.

H_4 There is no statistically significant difference between users and librarians in their awareness of intended instruction of users by librarians.

Definition of Terms

The meanings of certain terms used in this study are to be understood as follows:

Reference question, encounter or transaction	"...[A]n information contact which involves the use, recommendation, interpretation, or instruction in the use of one or more information sources or knowledge of such sources by a member of the reference... staff."[38]
Government document or publication	"Informational matter which is printed as an individual document at government expense or as required by law."[39]
Reference librarian or librarian	Any of four staff members of the Documents Department at Duke who holds an MLS degree and was involved in the second survey.
User or patron	Any person including faculty, staff, or students at Duke or the general public who addresses a reference question in person or by phone to a staff member of the department.

Assumptions

In carrying out this study, the following assumptions were made:

1) The users of the Documents Department share certain distinctive characteristics and information-seeking patterns, and it is possible to measure selected of these variables.

2) The survey is a valid and reliable means of collecting information about the characteristics and information-seeking patterns of the users and about the evaluations of users and reference librarians concerning the reference encounter.

Scope and Limitations

A broad view of reference service encompasses all of its several facets, i.e., the answering of questions, the preparation of bibliographic guides, bibliographic instruction and on-line searching of databases. However, this study focuses on only one aspect of reference service--the encounter between librarian and user resulting from the asking of a reference question by the user. Many reference librarians would consider this aspect as the central element of reference service; nevertheless, there are other important elements which are not considered in this study.

Also, this study covers only users who come to or phone the Public Documents and Maps Department. It does not consider potential users of the department. This omission may be an important one, since the literature on government documents stresses their underutilization.

There are two methodological limitations related to sampling associated with this study:

1. The sampling period was limited to several weeks during the spring semester, 1984; thus the samples may not be truly representative of the user population throughout the year.

2. The second survey, which looks at librarian and user evaluations of the reference encounter, was administered to a relatively small sample which was not chosen on a random basis. It was impractical to choose a larger, random sample because of limitations on the researcher's time and a desire not to further disturb the normal routine of the Department.

Survey Procedures

Survey I

Subjects - The population for this survey included users of the Public Documents and Maps Department of Perkins Library at Duke University during the two-week period of Monday, March 12, 1984 - Sunday, March 25, 1984.

Sample - The sample was selected using cluster sampling techniques in the following manner:

1) Weekday days (Monday-Thursday) were divided into three time periods corresponding to the morning (8 a.m.-1 p.m.), afternoon (1 p.m.- 5 p.m.) and evening (7 p.m.-10 p.m.) hours of the department. Weekend days were divided into two time periods, morning (8 a.m.-1 p.m.) and afternoon (1 p.m.-5 p.m.) for Friday and Saturday; and afternoon (2 p.m.-6 p.m.) and evening (6 p.m.-10 p.m.) for Sunday.

2) Thus there were 18 time periods per week and 36 for the 2-week sampling period. Based on previously compiled daily counts of reference questions from the months of October to December, the researcher estimated that it was necessary to select 15 of the 36 time periods in order to achieve a sample size of at least 100. Then, using a table of random numbers, the researcher selected 15 time periods.

Procedure - During each time period selected, the staff member assigned to the reference desk distributed the questionnaire from the first survey to each person who asked a reference question in person; for users who asked a question by telephone the staff member administered the questionnaire on the phone.

Questionnaire - The questionnaire (see Appendix A) was developed in consultation with the staff of the Documents Department. After pretesting

it with 25 users during the time period of March 5-9, 1984, the researcher made minor adjustments in wording.

Survey II

Subjects - The population for this survey included users of the Public Documents and Maps Department during the month of April, 1984.

Sample and Procedure - Due to limitation on the researcher's time and a desire not to disturb further the department's normal work patterns, the researcher decided against using a rigorous method of selecting a random sample of reference encounters.

Instead, the researcher visited the department during afternoons and evenings about twice per week during April. While sitting near the reference desk he observed patrons and librarians and, based on his experience working in the department, he selected reference encounters which seemed typical. When the initial encounter between the user and librarian had ended, he gave questionnaires to the librarian and the user.

Questionnaires - The questionnaires (see Appendix B) were the same as those used in the Howell study cited in the previous chapter.[40] Items on the two questionnaires were paired so that both the librarian's and the user's evaluations were obtained about each aspect of the reference encounter.

CHAPTER III

PART I - A USER PROFILE OF THE PUBLIC DOCUMENTS AND MAPS DEPARTMENT

The purpose of the first survey employed in this study was to gather baseline data about the characteristics and information-seeking patterns of the users of the Public Documents and Maps Department of Perkins Library at Duke University (referred to in this chapter as the Documents Department). These data consist of such selected variables as the status of the users and the frequency of first-time users.

Two categories of users provide the framework for in-depth analysis: undergraduate students and graduate students-faculty. (Graduate students and faculty were combined in one group based on the assumption that they have similar characteristics and information-seeking patterns.) The researcher analyzed group differences using the chi square (X^2) test. The last section of this part presents the results of this analysis.

The following sections present the results of the first survey, the user profile. Each section discusses the question's purpose and the results, and presents the data in tabular form.

Response Rate

During the two week survey period of March 12-25, 1984, 127 questionnaires were distributed to in-house users and five questionnaires were administered to telephone callers. Of the 127 in-house questionnaires, 117 were returned; upon examination one was determined to be unusable. All five telephone questionnaires were usable. Thus, a total of 121

questionnaires were returned resulting in a usable response rate of 92 percent (n=121).

Question 1-User Status

The purpose of this question was to determine who were the most frequent users of the Documents Department reference service. As can be seen in Table III-1, most users (93%) are members of the Duke community. Moreover, most of them (79%) are Duke students, either undergraduate or graduate.

Of the nine users not affiliated with Duke, four were graduate students from other universities. Thus only five users (4%) could be considered members of the "general public" (i.e., people who are not affiliated with Duke and who are not students). Faculty members also constitute a relatively small group of users (4%), a finding similar to that of other studies.[41]

TABLE III - 1

USER STATUS

STATUS	FREQUENCY	PERCENTAGE*
Duke undergraduate student	78	64%
Duke graduate student	18	15%
Duke faculty member	5	4%
Duke staff member	8	7%
Perkins Library staff member	3	3%
Other users	9	7%
TOTAL	121	100%

* Percentages have been rounded to whole numbers throughout this study.

Question 2 - Subject Area

This question's purpose was to discover in what subject areas the users were seeking information. Table III-2 shows that most (73%) of the 121 respondents were seeking information in the social sciences. Of this group, 42 (or 35% of the overall total) were working in the field of public policy/ political science. This finding reinforces the perception of staff members of the Documents Department that documents are heavily used by students working on class assignments in the field of public policy/political science.

TABLE III - 2

SUBJECT AREAS OF QUESTIONS

Subject Area	Frequency	Percentage
Social Sciences		
Public Policy/ political science	42	35%
Economics	18	15%
History	15	12%
Law	5	4%
Business	3	3%
Other social sciences	5	4%
Subtotal	88	73%
Non-Social Sciences		
Medicine/ health sciences	6	5%
Personal need	10	8%
Other	17	14%
Subtotal	33	27%
TOTAL	121	100%

Question 3 - First Visit

The aim of question 3 was to discover what proportion of the patrons were first-time users. Of the 121 users 27 (22%) were visiting the Documents Department for the first time. This figure seems like a high percentage; however, since we have no comparative data from other documents or reference departments, it is difficult to draw a definite conclusion. Nevertheless, it seems reasonable to assume that these first-time users generally require more reference assistance than experienced users. Table III-3 shows the proportion of first-time users.

TABLE III-3

FIRST VISIT

Users	Frequency	Percentage
First Visit	27	22%
Not first visit	94	78%
TOTAL	121	100%

Questions 4 and 5 - Sources of Referral

The purpose of these questions was to determine how many users, both first-time and experienced ones, were specifically referred to the Documents Department and by whom. (Because of the physical location of the Documents Department--in the basement of the library--and the specialized nature of its resources, it was assumed for these questions that first-time users were referred by someone to the department and did not simply decide on their own to go there.)

Table III - 4 shows that 63 (52%) of the 121 users were referred to the Documents Department. For first-time users, the modal source of referral (56%) was the main Reference Department of Perkins Library. For experienced users, 62 percent came to the Documents Department based on their previous knowledge of the Department.

TABLE III - 4

SOURCES OF REFERRAL

	First-time Users		Experienced Users		All Users	
Referred by:	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Professor	3	11%	15	16%	18	15%
Student	5	18%	4	4%	9	8%
Main Reference Department	15	56%	14	15%	29	24%
Another library	1	4%	3	3%	4	3%
Other	3	11%	-	-	3	2%
Total Referrals	27	100%	36	38%	63	52%
Previous knowledge	-	-	58	62%	58	48%
TOTAL	27	100%	94	100%	121	100%

Question 6 - Types of Questions

Question 2 revealed the users' assessment of the subject areas in which information was sought. The purpose of question 6 was to determine from the librarian's viewpoint the types or categories of questions asked.

The term "type" as used in this context, refers mainly to the search strategy used by the librarian in attempting to help the patron find information. In general, questions requiring similar search strategies and the use of similar sources were grouped together based on the responses of the users to question 6.

Because the design of the survey instrument did not allow the users to describe their information desires in depth, each question has been assigned to only one category. It is likely that some users' actual information desires overlapped these categories. For such users this categorization represents the initial search strategy used for their questions.

Table III - 5 briefly defines each category and shows the frequencies for each type of question.

TABLE III - 5

TYPES OF QUESTIONS

Category	Definition and Examples of Sources	Frequency	Percentage
Legislative information	Status and background of specific legislation; use of CIS Index, C Q Weekly Report.	25	21%
Request for a specific title or article	Verifying bibliographic citations and finding a Superintendent of Documents class number; use of OCLC, Monthly Catalog and other indexes.	19	16%
Statistical information	Statistics on any subject e.g., crime, health, and population; use of American Statistics Index, Census materials, and Statistical Abstract.	18	15%

Category	Definition and Examples of Sources	Frequency	Percentage
Current topical information	General information on current topics and matters of public policy e.g. drugs, U.S. foreign policy, health care (inquiry not focused on specific legislation); use of wide range of indexes and publications.	13	11%
Maps	Request for map of a specific area; use of aids to locating maps e.g., map catalog, indexes to USGS topographic maps.	8	7%
Historical documents	Locating documents older than 15 years to be used for historical purposes; use of various indexes e.g., CIS Index to Congressional Hearings (prior to 1970), CIS Serial Set Index, Subject Index 1900-1971 to Monthly Catalog.	9	7%
International documents	Locating information contained primarily in the publications of international agencies, e.g., the United Nations and The World Bank; use of Index to International Statistics, UN publications and indexes such as UNDOC.	6	5%
Legal reference	Locating federal and state laws and regulations and Supreme Court cases; use of federal and state statutes, Code of Federal Regulations U.S. Reports.	5	4%
Tax information	Locating U.S. tax forms and IRS tax tax information publications.	4	3%
Other	Questions not fitting one of above categories.	14	11%
TOTAL		121	100%

Question 7 - Sources of Bibliographic Citations

The purpose of question 7 was to find out what percentage of users were looking for a specific publication, the title of which they already knew before coming to the Documents Department. In addition, the question asked how the readers found a reference to this publication (e.g., through an index or a reference in a book).

After analyzing the responses to this question, the researcher decided that it had been widely misunderstood. Of the 121 respondents, 76 (63%) indicated that they were looking for a specific publication whose title they knew beforehand. In analyzing the responses to question 6, however, the researcher found that only 19 (16%) of the respondents indicated that the "information" they wanted was retrieval of a specific title. It seems that many users who answered question 7 had some idea that there was a specific publication which would supply the information they wanted, but the answers to question 6 indicated that many fewer users actually knew the title of this publication.

Thus, for question 7, the researcher decided to analyze only the responses of those users whose answers to question 6 clearly indicated they came to the department to retrieve a specific publication whose title they knew beforehand.

Table III - 6 presents the sources of bibliographic citations for the titles desired by these 19 users.

TABLE III - 6

SOURCES OF BIBLIOGRAPHIC CITATIONS

Source	Frequency	Percentage
Reference in a book, journal or newspaper	5	27%
Professor	4	21%
Index other than those in the Documents Department	3	16%
Main Catalog	2	10%
Student	2	10%
Other	3	16%
TOTAL	19	100%

In order to have avoided confusion about question 7, it would have been desirable to ask the user to write the title of the publication being sought as part of the answer to the question. This might have confirmed that the user had a specific title in mind.

Question 8 - Amount of Time Spent in the Documents Department

This question's purpose was to determine how much time users spent in the Documents Department. As illustrated in Table III - 7, most users (72%) spent less than half an hour, although a substantial proportion (28%) spent more time. Of the six time periods, the modal group (28%) is the 5-15 minute group.

As with question 3 (which identified first-time users), it is difficult to draw any firm conclusions from this information since we have no standards for comparison. The data suggest, however, that many users (those who stay more than half an hour) have complex reference questions which may require in-depth assistance from a librarian.

TABLE III - 7
AMOUNT OF TIME SPENT
IN THE DOCUMENTS DEPARTMENT

Time Period	Frequency	Percentage
Less than 5 minutes	25	21%
5-15 minutes	34	28%
16-30 minutes	28	23%
SUBTOTAL- ½ hour or less	87	72%
31-59 minutes	14	12%
1-2 hours	14	12%
More than 2 hours	6	4%
SUBTOTAL - more than ½ hour	34	28%
TOTAL	121	100%

Analysis of Group Differences

Two major groups of users, i.e., Duke undergraduate students and Duke graduate students-faculty, were selected for analysis of group differences in characteristics and information-seeking patterns. (It was not feasible to analyze other groups because of the low numbers of them included in the sample.)

Table III - 8 shows the frequency distribution of undergraduate students and graduate students-faculty in the sample.

TABLE III - 8

USER STATUS

Status	Frequency	Percentage
Duke undergraduate students	78	64%
Duke graduate student-faculty	23	19%
Other	20	17%
TOTAL	121	100%

Potential group differences between undergraduate students and graduate students-faculty were tested for using X^2. No statistically significant differences between the two groups were found in any of the variables, including subject areas of questions, proportion of first-time users, sources of referral, types of questions, and sources of bibliographic citations.

Summary

Most users of the Documents Department reference service are Duke students. Also, most are seeking information in the area of the social sciences. About half the users are referred to the department, often by the Main Reference Department of the library. The most frequently asked

types of questions are 1) legislative information, 2) request for a specific title or article, and 3) statistical information. For the variables tested, no statistically significant differences emerged with respect to characteristics or information-seeking patterns between the groups of undergraduate students and graduate students-faculty.

PART 2 - AN ANALYSIS OF USER - LIBRARIAN REFERENCE ENCOUNTERS

The purpose of the second survey was to gain some insight into the effectiveness of the provision of reference service in the Documents Department by analyzing a series of reference encounters between users and librarians.

The survey consisted of two questionnaires-one for librarians and one for users. The items on each questionnaire were matched so as to obtain both the librarian's and the user's evaluations of each aspect of the reference encounter. The researcher analyzed group differences in response patterns using the chi square (X^2) method at the .05 level of significance.

The following sections discuss the purpose and results of each question and, where appropriate, present the results in tabular form.

Response Rate

During the survey period of April 1984, the researcher asked 40 users to participate in the survey. None refused and all returned their questionnaires, as did the librarians, resulting in a 100% response rate.

Question 1 - Question Negotiation

The researcher reviewed the librarians' questionnaires to determine whether there was a difference between the responses to the two parts of question 1 - "the user's original question" and "what the user really wanted." In the case of substantially different responses, the researcher assumed that the librarian used question negotiation to clarify what

information the user actually wanted. Of the 40 questions, 16 (40%) required question negotiation.

Question 2 - User Status

The purpose of this question was to determine the accuracy of the librarians' initial perceptions of user status. Such a perception is important, because an accurate impression of user status can help the librarian determine the needs of the user. For example, undergraduates working on a term paper have different information needs than graduate students working on a doctoral thesis. Librarian perceptions of user status were correct in 35 (88%) of 40 cases. This seems like a high rate of accuracy and suggests that the librarians are generally very familiar with the various groups of users.

Table III - 9 shows the actual status of the users studied in this survey. The distribution of user groups of this sample, which was not chosen on a random basis, is roughly the same as the distribution of the groups in the sample for the first survey, which was chosen on a random basis. Thus it appears that the sample used for this survey may be representative of the user population.

TABLE III - 9

USER STATUS

Status	Frequency	Percentage
Duke undergraduate student	24	60%
Duke graduate student	7	18%
Duke faculty member	2	5%
Duke staff member	1	2%
Perkins Library staff member	1	2%
Other	5	13%
TOTAL	40	100%

Question 3 - User Familiarity with the Documents Department

As a reference librarian begins to assist a patron, it is useful to "...determine how much the patron already knows about the reference tools and the library in order to choose an appropriate technical level for his interaction with the patron."[42]

Users and librarians were in agreement in their ratings of user familiarity with the Documents Department in 21 out of 40 cases. Users and librarians concurred that the user's familiarity was "poor" or "fair" in 19 cases, and "good" in only 2 cases. In the 19 cases of disagreement, the user rated his familiarity with the Department higher than the librarian did in 13 cases and lower in only 6 cases.

Table III - 10 presents the frequency distribution of the evaluations of user familiarity with the Documents Department. As shown by the X^2 value, there is a statistically significant difference between users and librarians in the overall pattern of responses, i.e., the users tend to rate their familiarity higher than the librarians do. It is likely, however, that the librarians' evaluations are more realistic.

TABLE III - 10

USER FAMILIARITY WITH THE DOCUMENTS DEPARTMENT- ALL RESPONSES

Rating of User Familiarity	By Librarians		By Users	
	Frequency	Percentage	Frequency	Percentage
good	3	8%	10	25%
fair or poor	37	92%	30	75%
TOTAL	40	100%	40	100%

$X^2 = 4.52$ with 1 d.f.

Significance = .05

When only cases of non-consensus between users and librarians are considered there is also a statistically significant difference. Table III - 11 shows the frequency distribution of responses for cases of non-consensus and the value of X^2.

TABLE III - 11

USER FAMILIARITY -
CASES OF NON-CONSENSUS

Rating of User Familiarity	Rating by librarian	Rating by user
Higher	6	13
Lower	13	6
TOTAL	19	19

$X^2 = 5.16$ with 1 d.f.

Significance = .05

Thus it is possible to reject the first null hypothesis, i.e., that there is no statistically significant difference between users and librarians in their evaluations of user familiarity with the Documents Department.

Quesiton 4 - Pinpointing the User's Needs

The purpose of this question was to measure user statisfaction with one aspect of the reference encounter - the ability of the librarian to pinpoint the information wanted by the user. As noted in Chapter I, however, measures of user satisfaction with library services tend to be high, possibly due to the users' low expectations of reference service or to their "...difficulty distinguishing between their pleasure at being helped and their satisfaction with the quality of help being received."[43] On the other hand, librarians may have a tendency to rate their performance unrealistically low. Thus it is appropriate to consider both user and librarian measures of librarian performance.

Users and librarians agreed in 23 cases that the librarians had pinpointed the users' information needs "very well," and in 3 cases that the librarians had done "moderately well." In the 14 cases of non-consensus, the librarian rated his or her performance lower than the user did in 12 cases and higher in only 2 cases.

Table III - 12 shows the evaluations of librarians and users of the librarian's performance in pinpointing the user's information needs. The X^2 value indicates that there is a statistically significant difference between users and librarians in their rating of librarian performance i.e., the users tend to rate the librarians' performance higher than do the librarians.

TABLE III - 12

PINPOINTING USER INFORMATION NEEDS- ALL RESPONSES

Rating of Librarian Performance	By Librarians		By Users	
	Frequency	Percentage	Frequency	Percentage
Very Well	25	63%	35	88%
Moderately well or poorly	15	37%	5	12%
TOTAL	40	100%	40	100%

$X^2 = 6.67$ with 1 d.f.

Significance = .01

When only cases of non-consensus are considered, there is also a statistically significant difference between the ratings of users and librarians. Table III - 13 presents the frequency distribution of responses for cases of non-consensus and the value of X^2.

TABLE III-13

PINPOINTING USER INFORMATION NEEDS- CASES OF NON-CONSENSUS

Ratings of Librarian Performance	By Librarians	By Users
Higher	2	12
Lower	12	2
TOTAL	14	14

X^2 = 14.28 with 1 d.f.

Significance = .01

Thus it is possible to reject the second null hypothesis, i.e., that there is no statistically significant difference between users and librarians in their evaluations of the librarian's ability to pinpoint the user's information needs.

Question 5 - Supplying the Right Amount of Information

As with the previous question, the purpose of this question was to measure an aspect of user satisfaction, in this case the performance of the librarian in supplying the right amount of information.

Users and librarians concurred in 26 out of 40 cases that the user received about the right amount of information. They agreed in two cases that the user received less information than he desired, and in one case that the user received more information than he desired. In the 11 cases of non-consensus, the librarian reported supplying less information than the user reported receiving in 7 cases and more information in 4 cases.

Table III - 14 presents the frequency distribution of the evaluations by users and librarians of the librarians' performance in supplying the right amount of information. In contrast to the results of question 4, there is no statistically significant difference between the responses of

all users and all librarians. In addition, there is no statistically significant difference between the responses of users and librarians in only those cases of non-consensus. Thus it is not possible to reject the third null hypothesis, i.e., that there is no statistically significant difference between users and librarians in their evaluations of the librarian's ability to supply the right amount of information.

TABLE III - 14

SUPPLYING THE RIGHT AMOUNT OF INFORMATION- ALL RESPONSES

Rating of Librarian Performance	By Librarians		By Users	
	Frequency	Percentage	Frequency	Percentage
Right amount of information provided	30	75%	33	83%
Too little or too much information provided	10	25%	7	17%
TOTAL	40	100%	40	100%

It is difficult to explain for this question why librarians did not rate their performance lower than the users did, as happened with the results of question 4. It is possible that the number of cases in the sample was too small to reveal a difference. Or it may be that the librarian's confidence in his or her performance increases once he or she feels the user's needs have been pinpointed.

Question 6 - Instruction in the Use of Reference Tools

The purpose of this question was to discover how well the users perceived intended instruction by the librarians in the use of reference tools.

Librarians and patrons agreed in 26 cases that instruction was given and in 6 cases that it had not been given. In the 8 cases of non-consensus,

7 users perceived instruction when none had been intended, and one did not perceive intended instruction.

Table III - 15 presents the frequency distribution of librarian and user responses to question 6. There is no statistically significant difference between the two groups. Thus it is not possible to reject the fourth null hypothesis, i.e., that is no statistically significant difference between users and librarians in their awareness of intended instruction.

TABLE III - 15

AWARENESS OF INTENDED INSTRUCTION- ALL RESPONSES

Instruction Intended	Intended by Librarians		Awareness by Users	
	Frequency	Percentage	Frequency	Percentage
yes	27	68%	33	83%
no	13	32%	7	17%
TOTAL	40	100%	40	100%

The analysis of question 6 may be more enlightening when viewed in conjunction with the results of question 5. For example, in 24 of the 26 cases of consensus on the presence of instruction, the user expressed satisfaction with the amount of information received. Furthermore, of the 7 users from question 5 who said they received too little or too much information, there was only one case of consensus that instruction had taken place.

These findings are similar to those of the Howell study where according to the authors:

> This suggests that reference librarians can assist patrons more effectively when they consciously cultivate a teaching role as opposed to acting more passively (and perhaps more impersonally) as an information source.[44]

Summary of Hypotheses and Results

The first two null hypotheses, i.e., that there is no statistically significant differences between the users' and librarians' evaluations of 1) the user's knowledge of government documents and 2) the librarian's ability to pinpoint the user's information needs were rejected. The third and fourth null hypotheses, however, were not disproved. These were that 3) there is no statistically significant difference between the evaluations of users and librarians of the librarians's performance in supplying the right amount of information and 4) there is no statistically significant difference between the users and librarians in their awareness of intended instruction.

In general, these findings are similar to, but not exactly the same as, those of the Howell study. One difference is that this study found that users tend to rate their familiarity with documents higher than librarians do, while the Howell study found no difference between the groups for this variable. This finding suggests that the many users of the Documents Department may have both an inadequate knowledge of government documents and an unawareness of their lack of knowledge.

For the two measures of patron satisfaction (hypotheses 3 and 4), the Howell study revealed the users' ratings to be significantly higher than the librarians' ratings for both measures. This study, however, found a significant difference for the first measure only (hypothesis 3). These findings suggest that the most difficult part of the reference encounter for the librarians is pinponting the information needs of the users. Such a conclusion is reinforced by the librarians' low rating of user familiarity with government documents. In other words, it is more difficult to clarify what a user wants when the user has a poor knowledge of both what information might be available and how to find it.

The results for the fourth hypothesis are perhaps the most significant. As the Howell study found, users are generally well aware of intended instruction by the librarians in the use of reference tools. Moreover, the user is more often satisfied with the outcome of the reference encounter when there is consensus that instruction has taken place than when there is disagreement about the presence of instruction.

The concluding chapter of this study discusses further the implications of the results of both the first and second surveys.

CHAPTER IV

CONCLUSION AND RECOMMENDATIONS

The results of this study seem to be generally comparable with the findings of other studies, in particular the Howell Study. User satisfaction with the provision of reference service in the Department appears to be high, although user familiarity with documents reference tools and sources appears to be low. In addition, users tend to respond favorably to individual instruction by the librarian in the use of reference tools and sources. Thus this study has essentially replicated Howell's study for the case of reference service for government documents.

However, because this study was concerned with only one institution and because of the methodological limitations of the surveys, this study's results are not generalizable for all government documents departments. Thus there is a need for other researchers to generate comparative data for other documents departments. For example, it would be useful to learn whether the user profile of other documents departments in large academic depository libraries resembles that of Duke.

The results of this study, however, do have further implications for the Documents Department at Duke. The following sections provide this researcher's recommendations concerning the provision of reference service in the Documents Department.

Staff Members' Knowledge and Reference Skills

As noted by Hernon and McClure, it is likely that "...the individual library staff member is the single most significant factor affecting the quality of reference service for government documents."[45] The results of

both the first and second surveys point to several areas where the staff members of the department might concentrate their efforts to improve their knowledge and skills.

From the results of question 2 of the first survey (subject areas of questions) it is clear that a good knowledge of the social sciences, particularly in public policy/political science, is an asset for doing documents reference work. Furthermore, the results of question 6 (types of questions) demonstrate that good skills in using certain heavily used indexes and sources (e.g., CIS Index, Congressional Quarterly publications, ASI Index) will allow the reference staff member to handle a large volume of the reference questions in the Department. Administrators of the Department might consider these factors in selecting and training the non-professional staff members of the Documents Department.

The results of the second survey underline the importance of the reference interview. It seems that many users, perhaps because of their unfamiliarity with the Department, express poorly what information they want and are also unaware of what information is available. Thus it would be desirable for the reference staff to evaluate and improve their interpersonal communication skills. As shown by the results of questions 5 and 6 of the second survey, good communication between user and librarian seems to lead more often to user satisfaction. Hernon and McClure suggest a number of strategies for improving the process of the reference interview.[46]

Bibliographic Instruction

The Documents Department currently has an active program of bibliographic instruction which is well-received by the user community. Most sessions are set up at the request of a faculty member. Based on the results of this study, however, the Documents Department might consider

a more formalized program. For example, just as the Reference Department gives a formal introduction to all freshmen on library research techniques, so too might the Documents Department set up a general introduction to documents research techniques for all public policy/political science students.

Given the current level of staffing in the Department, such a program might not be feasible. It should be possible, however, to identify certain faculty members whose classes frequently use the Department and then ensure that all such classes receive formal instruction from a member of the Documents staff.

Further Evaluation of Reference Service

While this study has provided some information about the effectiveness of the Department's reference service, it would be desirable to design a methodology for continuing evaluation of the Department's reference service. As noted by Lancaster, such evaluation should be used as a "diagnostic tool"[47] and not as a part of evaluations for salary increases or promotion.

One approach to evaluation would be the administration of test questions, either directly or unobtrusively, to the reference staff. As discussed in Chapter I, this is the most reliable and direct method of assessing the performance of the reference staff. Such quesitons would help to reveal weaknesses in staff members' knowledge of subjects and sources.

Further surveys of the users might also aid in the evaluation process. Despite the tendency of users to give high performance ratings to librarians, it might be possible to design survey instruments that are more sensitive to the users's true levels of satisfaction.

> Questions aimed at discovering patron expectations for service and forcing patrons to make the distinction between the psychological and substantive outcome of reference encounters would be useful additions to future patron-satisfaction survey instruments.[48]

In addition, since this study has surveyed only actual users of the Department, it would be desirable to survey the potential user community, e.g. all students and faculty in the social sciences.

Cooperation and Referral

As demonstrated in the results of the first survey, librarians in the Reference Department along with faculty are important sources of referrals of patrons to the Documents Department. While there is no indication of any problems associated with referrals from these sources, it would be desirable for the Documents Department to help other librarians and professors better understand what kinds of information are available in government documents.

An example of formal cooperation between the Documents Department and the Reference Department occurred during one semester last year when a librarian from the Reference Department spent several hours per week learning about documents and staffing the reference desk in the Documents Department. Ideally, such exchanges should work both ways, since librarians in the Documents Department often refer patrons to the Reference Department.

Because of their low usage of documents and their many other time commitments, it is more difficult to increase faculty members' awareness and knowledge of government documents. In addition, many faculty members' knowledge and awareness of library resources in general may be relatively low. Thus it would be desirable, if staffing and time permit, for the Documents Department to test an "outreach" program aimed at

increasing faculty awareness of government documents; or if the library administration should undertake a plan to improve faculty awareness of library resources then government documents should be specifically included.

Areas for Further Research

As already noted, some of the results of this study would be more meaningful if comparative data were available in other studies. There is a need for comparative data about the characteristics and information-seeking patterns of users of other government documents departments. It would also be valuable to further test other methodologies for the evaluation of reference service such as the administration of test questions.

In order to discover what are the unique aspects of documents reference service, there is also a need to compare the provision of reference service in documents departments to its provision in general reference departments. For example, does the search strategy for documents reference generally require more steps than for general reference? And how do the proportions of factual vs. in-depth questions compare between documents reference and general reference?

Hernon and McClure suggest a number of other areas where research on the provision of reference for government documents is needed.[49] As Hernon and McClure conclude, the value of such research lies in its potential for improving the quality of reference service for government documents:

> Awareness of the role of research, combined with implementation of research results and development studies, will enable documents librarians to adapt better to new environments and situations, as well as to better serve the information needs of their clientele, both present and potential.[50]

APPENDIX A

DUKE UNIVERSITY LIBRARY
PUBLIC DOCUMENTS AND MAPS DEPARTMENT USER SURVEY

No.:_____
Date:_____
Time:_____

In order to learn more about the users of the Public Documents and Maps Department and thus improve our reference service, we are conducting this survey. Please take a few minutes to complete this questionnaire, and leave it in the box at the reference desk before you leave the department. Thank you.

1. Are you (please check the appropriate category.)
   - ____Duke undergraduate student?
   - ____Duke graduate or professional school student? (Specify dept. or school.)_____
   - ____Duke faculty member? (Specify dept. or school.)_____
   - ____Perkins library staff member?
   - ____Duke Staff Member?
   - ____Other? Specify occupation and institutional affiliation, e.g., graduate student at UNC or engineer at IBM, Raleigh.
     _____
     _____

2. For what subject area or course are you seeking information? (Please check the most appropriate category.)
   - ____Public Policy
   - ____Political Science
   - ____History
   - ____Economics
   - ____Business
   - ____Law
   - ____Medicine/Health Sciences
   - ____Other (Specify subject.)
     _____
   - ____Personal need, not related to school or work. (Specify.)
     _____

3. Is this your first visit to the Public Documents and Maps Department?
   - ____YES — IF YES, ANSWER QUESTION 4 AND SKIP QUESTION 5.
   - ____NO — IF NO, ANSWER QUESTION 5 AND SKIP QUESTION 4.

4. If this is your first visit to the Public Documents and Maps Department, how did you find out about it.
   - ____Referred here by a professor
   - ____Referred here by a student
   - ____Referred here by a librarian in the main Reference Dept., upstairs.
   - ____Referred here by a library staff member in another library (Specify library.)
     _____
   - ____Other (Specify.)_____
     _____

5. If this is not your first visit to the Public Documents and Maps Department, who referred you here this time?
   - ____A professor
   - ____A student
   - ____A librarian in the main Reference Dept. upstairs
   - ____A librarian in another library (Specify library.)_____
   - ____Other (Specify.)_____
     _____
   - ____No one, I came here based on previous knowledge or experience with the department.

6. Briefly describe the information you are looking for, e.g., the consumer price index for 1983, a map of Lebanon, or information about a senator's voting record._____

_____

_____

7. If you came to the department looking for a specific publication, the title of which you knew beforehand, where did you get the reference?

____An index (Specify index.)_____
____Main catalog, upstairs.
____Reference in a book, journal, or newspaper.
____Reference in another government document.
____From a professor or graduate assistant.
____From a student
____Other (Specify.)_____

8. Estimate the length of time you spent in the Public Documents and Maps Department during this visit.

____less than 5 minutes
____5-15 minutes
____16-30 minutes
____31-59 minutes
____1-2 hours
____more than 2 hours

APPENDIX B

DUKE UNIVERSITY
PUBLIC DOCUMENTS AND MAPS DEPARTMENT
USER SURVEY II, STAFF COPY

No.:_____
Date:_____
Time:_____

1. What was the user's original question?

   What did the user really want?

2. On the basis of this encounter, I would guess that this user is:

   _____Duke undergraduate student
   _____Duke graduate student
   _____Duke faculty member
   _____Duke staff member
   _____Perkins Library staff member
   _____Other_____

3. On the basis of this encounter, I would judge this user's level of familiarity with the Documents Department and its resources to be:

   _____good
   _____fair
   _____poor

4. During the question-negotiation process, how well did you pinpoint the patron's needs?

   _____very well
   _____moderately well
   _____poorly
   Comments:_____
   _____

5. Do you think the patron:

   _____got less information than he or she wanted?
   _____was satisfied with the amount of information?
   _____got more information that he or she wanted?

6. While assisting the user, did you instruct him or her in the use of reference sources or tools, indexes, etc.?
   _____yes
   _____no
   If yes, which ones?

(Spring, 1984)

APPENDIX B

DUKE UNIVERSITY
PUBLIC DOCUMENTS AND MAPS DEPARTMENT
USER SURVEY II, USER COPY

No.:_____
Date:_____
Time:_____

1. What did you ask the reference librarian?

2. Are you (Please check the appropriate category.)

_____Duke undergraduate student?
_____Duke graduate student?
_____Duke faculty member?
_____Duke staff member?
_____Perkins Library staff member?
_____Other? (Please specify occupation and institutional affiliation, e.g., grad. student at UNC or engineer at IBM)_____
_____

3. How would you rate your familiarity with the Documents Department?

_____good
_____fair
_____poor

4. How well did the reference librarian pinpoint your needs?

_____very well
_____moderately well
_____poorly
Comments:_____
_____

5. Did you receive (check one)

_____too little information?
_____about the right amount of information?
_____more information that you wanted or could use?

6. While assisting you, did the librarian instruct you in the use of reference sources or tools, such as the card catalog, bibliographic indexes, etc.?
_____yes _____no If yes, what did you learn?

(Spring, 1984)

NOTES

Introduction

[1]National Commission on Libraries and Information Science, Government Publications: Their Role in the National Program for Library and Information Services, by Bernard M. Fry, (Washington, D.C.: Government Printing Office, 1978), p. 12.

[2]Peter Hernon and Charles McClure, Improving the Quality of Reference Service for Government Publications, (Chicago: American Library Association, 1983), p. 27.

Chapter I

[3]Samuel Rothstein, "The Measurement and Evaluation of Reference Service," Library Trends 12 (January 1964): 456.

[4]Terry Weech, "Evaluation of Adult Reference Service, Library Trends 22 (January 1974): 315.

[5]This categorization is essentially the same as that used by Weech (1974).

[6]Rothstein, p. 457.

[7]Ibid., p. 459.

[8]Marcella Ciucki, "Recording of Reference/Information Service Activities: A Study of Forms Currently Used." RQ 16 (Summer 1977): 273-283.

[9]Lloyd Houser, New Jersey Area Libraries: A Pilot Project Toward the Evaluation of the Reference Collection, (New Brunswick, N.J.: New Jersey Library Association, 1968), cited by Weech, p. 322.

[10]New York, State Education Department, Division of Evaluation, Emerging Library Systems: The 1963-66 Evaluation of the New York State Public Library Systems, 1967, cited by Weech, p. 322.

[11]Ellis Mount and Paul Fasana, "An Approach to the Measurement of Use and Cost of a Large Academic Research Library System: A Report of a Study Done at Columbia University Libraries," College and Research Libraries 33 (May 1972): 203, cited by Weech, p. 322.

[12]Charles A. Bunge, "Professional Education and Reference Efficiency," unpublished. Ph.D. thesis prepared for the University of Illinois, 1967, cited by Weech, p. 323.

[13]Benita J. Howell, Edward B. Reeves, and John Van Willigen, "Fleeting Encounters--A Role Analysis of Reference Librarian-Patron Interaction," RQ 16 (Winter 1976): 127.

[14]Mary Jo Lynch, "Reference Interviews in Public Libraries," The Library Quarterly 48 (April 1978): 119-142.

[15]Ibid., p. 120.

[16]Ibid., p. 135.

[17]Ibid., p. 131.

[18]Ibid., p. 137.

[19]Vernon E. Palmer and Lucy M. Gray, Costs and Effectiveness of Interlibrary Loan and Reference Activities of Resource Libraries in Illinois, (Springfield Illinois State Library, 1972), cited by Weech, p. 325.

[20]"A Commitment to Information Services: Developmental Guidelines, " RQ 15 (Summer 1976): 327-330.

[21]"Standards for Reference Services in Public Libraries," Library Association Record 72 (1970): 53-57, 1970, cited in F. W. Lancaster, The Measurement and Evaluation of Library Services, (Arlington, VA: Information Resources, 1977), p. 78.

[22]Ibid.

[23]Weech, p. 326.

[24]Lancaster, p. 90.

[25]Ibid.

[26]Thomas Childers and Terence Crowley, Information Service in Public Libraries: Two Studies, (Metuchen, NJ: Scarecrow, 1971).

[27]Thomas Childers, "The Test of Reference," Library Journal 105 (April 15, 1980) 924-925.

[28]Marcia J. Myers and Jassim M. Jirjees, The Accuracy of Telephone Reference/Information Services in Academic Libraries, (Metuchen, NJ: Scarecrow, 1983).

[29]Peter Hernon and Charles McClure, Improving the Quality ofReference Service for Government Publications (Chicago: American Library Association, 1983), pp. 58-86.

[30]Ibid., p. 111.

[31]Ibid.

[32]Lancaster, p. 109.

[33]Peter Hernon, Use of Government Publications by Social Scientists, (Norwood, NJ: Ablex, 1979.), cited by Hernon and McClure, p. 8.

[34]Jean L. Sears and Marilyn K. Moody, "Government Documents Use by Superintendent of Documents Number Areas," Government Publications Review 11 (March - April 1984): 105.

[35]Hernon and McClure, p. 4.

Chapter II

[36]Howell, et al., p. 125.

[37]Weech, p. 321.

[38]The National Center for Education Statistics, "Definitions and Instructions," Library General Information Survey, College and University Libraries, Fall 1979, quoted by Howard D. White, "Measurement at the Reference Desk," Drexel Library Quarterly 17 (Winter 1981): 33.

[39]U.S. Code, Title 44, sec. 1901, quoted by Fry, p. viii.

[40]Howell, et al., pp 128-129.

Chapter III

[41]See, for example, Sears and Moody, p. 105 and Hernon, Use of Government Publications by Social Scientists.

[42]Howell, et al., pp. 126-127.

[43]Ibid., p. 127.

[44]Ibid.

Chapter IV

[45]Hernon and McClure, p. 111.

[46]Ibid., pp. 121-125.

[47]Lancaster, p. 90.

[48]Howell, et al., p. 127.

[49]Hernon and McClure, pp. 82-84 and 188-193.

[50]Ibid., p. 192.

BIBLIOGRAPHY

Childers, Thomas and Crowley, Terence. Information Service in Public Libraries: Two Studies. Metuchemn, N.J.: Scarecrow, 1971.

Childers, Thomas. The Effectiveness of Information Service in Public Libraries: Suffolk County. School of Library and Information Science, Drexel University. Philadelphia, July 1978.

Childers, Thomas. "The Test of Reference." Library Journal 105 (April 15, 1980): 925-928.

Ciucki, Marcella. "Recording of Reference/Information Service Activities: A Study of Forms Currently Used." RQ 16 (Summer 1977): 273-283.

"A Commitment to Information Services: Developmental Guidelines." RQ 15 (Summer 1976): 327-330.

Drott, M. Carl. "Random Sampling: A Tool for Library Research." College and Research Libraries 30 (March 1969): 119-125.

Goldhor, Herbert and Weech, Terry. "Obtrusive versus Unobtrusive Evaluation of Reference Service in Five Illinois Public Libraries: A Pilot Study." The Library Quarterly 52 (October 1982 1982): 305-324.

Goldhor, Herbert and Weech, Terry. "Reference Clientele and the Reference Transaction in Five Illinois Public Libraries." Library and Information Science Research 6 (January-March 1984): 21-42.

Hernon, Peter and McClure, Charles. Improving the Quality of Reference Service for Government Publications. Chicago: ALA, 1983 (ALA Studies in Librarianship no. 10).

Hernon, Peter. Use of Government Publications by Social Scientists. Norwood, N.J.: Ablex, 1979.

Howell, Benita; Reeves, Edward B; and Van Willigen, John. "Fleeting Encounters--A Role Analysis of Reference Librarian-Patron Interaction." RQ 16 (Winter 1976): 124-129.

Jennerich, Elaine Z. "Before the Answer: Evaluating the Reference Process." RQ 19 (Summer 1980): 360-366.

Jirjees, Jassim M. and Myers, Marcia J. The Accuracy of Telephone Reference/ Information Services in Academic Libraries. Metuchen, N.J.: Scarecrow, 1983.

Kantor, Paul B. "Quantitative Evaluation of the Reference Process." RQ 21 (Fall 1981): 43-52.

Lancaster, F.W. The Measurement and Evaluation of Library Services. Arlington, Va.: Information Resources, 1977.

Lynch, Mary Jo. "Reference Interviews in Public Libraries," The Library Quarterly 48 (April 1978): 119-142.

_____. "Research in Library Reference/Information Service." Library Trends 31 (Winter 1983): 401-420.

National Commission on Libraries and Information Science. Government Publications: Their Role in the National Program for Library and Information Services, by Bernard M. Fry. Washington, D.C.: Government Printing Office, 1978.

Pings, Vern M. "Reference Services Accountability and Measurement." RQ 16 (Winter 1976): 120-123.

Powell, Ronald R. "Reference Effectiveness: Library and Information Science Research: 6 (January-March): 4-19.

Rothstein, Samuel. "The Measurement and Evaluation of Reference Service." Library Trends 12 (January 1964): 456-472.

Schmidt, Janine. "Evaluation of Reference Services in College Libraries, in New South Wales, Australia" in Library Effectiveness: A State of the Art ALA, 1980.

Sears, Jean L. and Moody, Marilyn K. "Government Documents Use By Superintendent of Documents Number Areas." Government Publications Review 11 (March-April 1984): 101-112.

Smith, Nathan M. and Fite, Stephen D. "Active Listening at the Reference Desk." RQ 21 (Spring 1982): 247-249.

Strong, Gary E. "Evaluating the Reference Product." RQ 19 (Summer 1980): 367-372.

Vavrek, Bernard. "Reference Evaluation-What the 'Guidelines' Don't Indicate." RQ 18 (Summer 1979): 335-340.

Webb, Eugene T. Nonreactive Measures in the Social Sciences. Boston: Houghton Mifflin. 1981.

Weech, Terry L. "Evaluation of Adult Reference Service." Library Trends. 22 (January 1974): 315-335.

White, Howard. "Measurement at the Reference Desk." Drexel Library Quarterly 17 (Winter 1981): 3-35.

White, Marilyn Domas. "The Dimensions of the Reference Interview," RQ 20 (Summer 1981): 373-381.